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Army Limited War Laboratory Seeks to Reduce Research Time

By George C. Wilson

Aberdeen Proving Ground, Md.—In its hastily constructed Limited War Laboratory here, Army is throwing away the old timetable for research and development projects and trying to make "quick reaction" its benchmark.

New timetable calls for going from approved concept to first prototype within 18 months, and preferably within six, compared with the usual three to five years. Army Secretary Stephen Ailes cited the laboratory to the House Armed Services Committee last week as proof of the Army's determination to respond quickly to the equipment needs of the South Vietnam war.

Success of the "quick reaction" dictum for research depends on both the Army and the aerospace industry acquiring new ways of thinking and acting. Already the Army is looking for administrative shortcuts to achieve this objective, while industry is showing increasing interest in anticipating and meeting limited war needs. One evidence of this is the 192 unsolicited proposals the Limited War Laboratory has received from industry so far. About 5% of them have resulted in contracts.

The laboratory physically is laid out for quick reaction. It has two floors of compact laboratories and offices in the main building and an adjacent shop. It is fairly standard for an engineer from the lab to walk out of his building with a handful of sketches and go directly to the shop to have them transformed into models.

More so than the bigger military research centers, the Limited War Laboratory has the flexibility to put aside the regular project list and turn to urgent demands of the moment. Right now most of those urgent demands are coming from Vietnam. Possible solutions to many of the problems are already far along at the laboratory.

On the second floor of the laboratory, for example, a model of a Bell UH-1 Iroquois is perched atop netting suspended over an artificial jungle of trees. The idea is to have the helicopter lay down rolls of strong netting so it catches on the branches. Then the helicopter would set an aluminum disc in the center of the netting, making a combat landing platform. Col. Austin Triplett, Jr., chief of the laboratory's operations branch and for three years the senior adviser to the Vietnamese Airborne Brigade, explained the need for such a platform in the South Vietnam war.

"To make one kilometer through the jungle or rice paddies in Vietnam," he said, "takes an hour. So what good is a landing zone five miles away? If you don't land right on the target with your troops, you might as well start out in a truck from Saigon in the first place. The enemy guerrillas know the escape routes and mine them as they leave. So what do you do? You get on top of them."

The landing platform is still in the research stage. But a new rope rig for lowering troops or cargo from trees or hovering helicopters already has been devised at the laboratory. The key is its metal friction device which is so effective that a paratrooper can lower himself by gripping the rope with only one hand. The Infantry Board at Ft. Benning, Ga., is now testing it.

Another Vietnam-oriented project is an acoustical disc that would be attached to a helicopter or fixed-wing aircraft to detect the passage of bullets. From the sound of the passing slugs, the device can tell the pilot where the fire is coming from—a real help in Vietnam where the Viet Cong shoot at aircraft from under dense cover. Once the pilot knows what quadrant the fire came from, he can avoid that area or attack it. The laboratory started out developing a device just to tell whether an aircraft was fired upon. Thiokol built the latest of these prototypes.

The Limited War Laboratory does much of its work in-house. But it also goes to industry for help—often on only one aspect of a project. This type of assistance is sometimes handled through service contracts—a contract that is awarded on the basis of the contractor's general capabilities rather than his response to a specific equipment request. Aberdeen advertises its general needs to industry and then picks contractors that appear best qualified to meet them. This saves the time of going through the selection process when a specific need arises. The Army signs a contract for a given amount of money and then draws against it by assigning specific tasks to the contractor over an extended project period.

Army research leaders long have claimed that they have been streamlining their procedures. But the Vietnam crisis, with congressional demands that the equipment needs get the highest priority, is giving impetus to further streamlining. As it is now, the Limited War Laboratory sometimes finds itself with the prototype of a limited war weapon in hand but not the necessary Small Development Requirement paper. This puts the laboratory in a position similar to an outside contractor trying to sell his proposal to the Army.

Secretary Ailes assured the House Armed Services Committee last week

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